

# **NEW MEXICO NURSING PROGRAM DEVELOPMENT ENHANCEMENT FUND STUDY**

**Requested by the Legislative Finance Committee**

**Prepared by the New Mexico Higher Education Department**

**January 2009**



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## EXECUTIVE SUMMARY

- The New Mexico Higher Education Department (NMHED) conducted the *New Mexico Nursing Program Development Enhancement Fund Study*, as requested by the New Mexico Legislative Finance Committee. The study evaluates the effectiveness of the Nursing Program Development Enhancement Fund (NPDEF) in meeting the demand for nurses practicing in New Mexico. More specifically the study addresses: (1) the demand for and capacity of nursing programs offered by New Mexico public higher education, and (2) the availability of incentives to encourage individuals to pursue nursing education. In addition, the report provides recommendations designed to expand the capacity of New Mexico's nursing programs, increase the availability of nurse faculty and ultimately nurses.
- The critical unmet demand for nurses in New Mexico is well documented. According to the New Mexico Department of Workforce Solutions (NMDWS) projection data and the New Mexico Board of Nursing (NMBON) data, there is a current shortage of 2,633 registered nurses (RNs) and 3,431 licensed practical nurses (LPNs). According to the Health Resources and Services Administration, by 2015 New Mexico has a projected shortage of 4,600 (RNs).
- There is an increasing demand for nurses, due primarily to the expanding healthcare needs of an aging New Mexico citizenry.
- The nursing shortage will increase in New Mexico as the current nursing population ages and retires, and others leave the profession due to dissatisfaction with working conditions.
- From FY04 to FY09 over approximately \$16.5 million has been allocated to New Mexico's public postsecondary institutions in supplemental funding for nursing program enhancement. Programs include the NPDEF, Nursing Student Loan-For- Service Program and Nurse Educator Enhancement Fund. Since FY08, an additional \$1 million has been made available to enhance nursing faculty salaries.
- During the period of FY06 to FY08, supplemental funding has resulted in the production of over 2,426 nurses.
- Supplemental funding has resulted in New Mexico's public postsecondary institutions admitting and enrolling a significantly higher rate and number of qualified nursing applicants. In FY06, 926 of 1,488 or (62%) qualified applicants were admitted to nursing programs. In FY08 1660 of 2,037 or (81%) of qualified applicants were admitted.
- Supplemental funding has resulted in the reduction of wait lists. In FY06 there were 199 out of 1,488 (13%) on the nursing student wait list, while in FY08 171 students out of 2,037 (8%) were on nursing student wait lists.
- Supplemental funding has resulted in an increase in the supply of nursing graduates in the past four years. To date, over 3,307 total nursing graduates have been produced.



- In November 2008, the NMHED conducted a survey of New Mexico's 17 public higher education institutions with nursing programs. Topics included: (1) the current enrollment of nursing programs; (2) graduation numbers; (3) student demographic data; and (4) National Council Licensure Examination (NCLEX) passage numbers. In addition, questions regarding obstacles to increasing program capacity were asked. Program directors indicated the top three obstacles to increasing nursing program capacity were;
  - shortage of qualified faculty available to teach;
  - lack of clinical sites; and
  - lack of student preparedness and/or retention issues.
- In response to a recommendation forwarded by a 2005 Legislative Finance Committee report<sup>i</sup>, a nursing enhancement taskforce was created who subsequently established a set of performance goals. According to these goals, it appears some progress is being made with respect to the NPDEF:
  - *Prepare 11,000 new registered nurses (RNs) to address the shortage in the next seven years (taking into account limited funding resources, the taskforce set an initial goal average of 400 nurses per year, which will result in a seven year production total of 2,100, far below the stated goal of 11,000. However, this again was an initial step). (Current 3 year production average of 600 nurses per year).*
  - *Create a 66/33 balance (66% Bachelor of Science in Nursing (BSN) and 33% Associate's Degree in Nursing (ADN) in the nursing profession since it directly impacts patient care. (when this goal was established, the current BSN rate was 35%). (Current 3 year average of 40% BSN/60% ADN enrollment; however, current 2008 enrollment is 45% BSN/55% ADN).*
  - *Educate new nurses to provide care for 2010 and beyond that will include innovations in nursing practice. (New Mexico's nursing programs utilize new cutting edge technologies in educating students).*
  - *Increase the number of nurses serving underserved populations and nurses from underserved populations (particularly Hispanics and Native Americans). (Hispanic student enrollment has decreased while Native American student enrollment has increased: FY06 1212 Hispanic/142 Native American to FY07 1290 Hispanic/171 Native American to FY08 1093 Hispanic/175 Native American).*
  - *Create collaborative partnerships among 2-year/4-year institutions, hospitals, other public/private sectors that will enhance statewide nursing programs. (New Mexico's nursing programs have developed collaborative partnerships with institutions in the form of articulated pathways and with hospitals in the form of clinical space).*
- Based on the findings of the *New Mexico Nursing Program Development Enhancement Fund Study*, the NMHED is proposing the following recommendations to increase nursing education capacity, improve student performance, increase the number of nurse faculty and ultimately increase in the supply of nurses:



### Short Term Recommendations

- Encourage career pathways for MSN and doctoral educators who will teach in nursing programs, with particular emphasis on the attraction of minority and non-traditional nurse educators
- Encourage and facilitate the development of dual credit and articulated nursing career pathways between our secondary and two year programs throughout the entire state
- Partner with employers for regionally coordinated clinical assignments
- Improve NCLEX pass rates by improving retention rates for nursing students, placing emphasis on targeted advisement, early diagnostic testing and remedial support systems
- Expand nursing student loan for service and faculty loan for service programs to allow loans for nursing education from any accredited school, with payback tied to state service
- Expand outreach and marketing of the nurse educator program throughout the state using healthcare networks

### Long-Term Recommendations

- Increase faculty salaries through multi-level strategies
- Continue to invest in the integration and shared use of the latest educational technology to supplement traditional clinical education programs
- Support the expansion of practical nursing programs in New Mexico
- Expand the RN to BSN programs to meet projected need
- Expand the University of New Mexico and New Mexico State University doctoral programs and other MSN programs to increase production of nursing faculty



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## INTRODUCTION

The New Mexico Higher Education Department (NMHED) as recommended by the New Mexico Legislative Finance Committee forwards the *New Mexico Nursing Program Development Enhancement Fund Study*. In addition, the NMHED forwards recommendations designed to expand the capacity of New Mexico's public nursing programs, improve the performance of our students and ultimately increase the availability of nurses practicing in New Mexico.

The United States is in the midst of a nursing shortage that is expected to intensify as baby boomers age and the need for health care grows. Compounding the problem is the fact that nursing programs across the country are struggling to expand enrollment levels to meet the rising demand for nursing care. New Mexico is no different in facing the challenge of increasing demand for nurses as well as increasing demand for the state's nursing programs to produce them. The gap between supply and demand for nurses is narrowing, however, due to significant collaborative efforts by higher education, the State, industry and others who have focused on addressing the nursing shortage. Recent initiatives are increasing the supply of nurses as well as the faculty needed to prepare additional nurses. Many of these initiatives are described in this report including: (1) Nurse Program Development Enhancement Fund (NPDEF), (2) Nursing Faculty Enhancement Fund, (3) Nursing Loan For-Service Program, and (4) Nurse Educator Loan For-Service Program. Nonetheless, the nursing shortage continues, especially within our state's rural and tribal communities.

The Nursing Program Development Enhancement Fund (NPDEF) provides public higher education institutions support to expand nursing programs. This support provides additional salary for nursing faculty and expands facilities and equipment in an effort to increase the number of graduates in the field of nursing. In response to a recommendation forwarded by a 2005 Legislative Finance Committee report<sup>ii</sup>, the NMHED created a nursing enhancement taskforce who subsequently established a set of performance goals. The taskforce included members from two and four year institutions with representation from the New Mexico State Health Policy Commission and industry as well. The goals and performance measures designed to address the critical shortage of nurses and used in evaluating NPDEF performance progress are as follows:

- *Prepare 11,000 new registered nurses (RNs) to address the shortage in the next seven years (taking into account limited resources, the taskforce set an initial goal average of 400 nurses per year, which will result in a seven year production total of 2,100, far below the stated goal of 11,000. However, this again was an initial step).*
- *Create a 66/33 balance (66% Bachelor of Science in Nursing (BSN) and 33% Associate's Degree in Nursing (ADN) in the nursing profession since it directly impacts patient care. (The current BSN rate is 35%).*
- *Educate new nurses to provide care for 2010 and beyond that will include innovations in nursing practice.*
- *Increase the number of nurses serving underserved populations and nurses from underserved populations (particularly Hispanics and Native Americans).*
- *Create collaborative partnerships among 2-year/4-year institutions, hospitals, other public/private sectors that will enhance statewide nursing programs.*



From FY04 to FY09 over approximately \$16 million has been allocated to New Mexico's public postsecondary institutions in supplemental funding for nursing program enhancement. Most recently the allocation of this funding has been through a competitive process in which institutions responded to request for proposals and were subsequently evaluated. This study aims to evaluate the progress made as it relates to the overall performance of our nursing programs and their ability to produce additional nurses for the state. This report is organized into the five sections identified below:

- The Initial Problem
- New Mexico Investment
- Results of New Mexico Investment
- Current State
- What We Need To Do Now





## THE INITIAL PROBLEM

According to Dr. Peter Buerhaus, the shortage of registered nurses (RNs) in the United States could reach as high as 500,000 by 2025, growing by 2% to 3% each year.<sup>iii</sup> Utilizing data from the New Mexico Department of Workforce Solutions (NMDWS), the New Mexico Center for Nursing Excellence (NMCNE) and the New Mexico Board of Nursing (NMBON), we were able to provide a more current demand/supply gap analysis for the state of New Mexico. For this study, we have distinguished registered nurses (RNs) from licensed practical nurses (LPNs) in an effort to better track the performance goal of preparing 11,000 RNs in seven years as outlined in the NPEDF as well as acknowledging that there is a difference in scope of practice and that there is a shortage in both professions.

### Demand

The NMDWS has provided a projected number of nurses that will be in demand via the New Mexico 2006–2016 Occupational Projections:

- The 2006 – 2016 projected demand for total (RNs) needed in New Mexico is significant (15,259) and far exceeds that of 22 of the top 25 health care related occupations in New Mexico (**Figure 1**). Registered nurse is the third top healthcare related demand occupation whether measured by 2016 employment, employment growth, or total annual openings. As illustrated by (**Figure 2**), projected annual openings for registered nurses (496) are 24 times greater than for respiratory therapists, the 25th ranked healthcare occupation (21).<sup>iv</sup>
- Total projected demand for (LPNs) is ranked 4th among New Mexico's top 25 demand healthcare occupations (5,558) whether measured by 2016 employment, employment growth, or total annual openings.

### Supply

Regarding the supply of nurses, the NMBON provided information on the number of nurses currently in the New Mexico labor market:

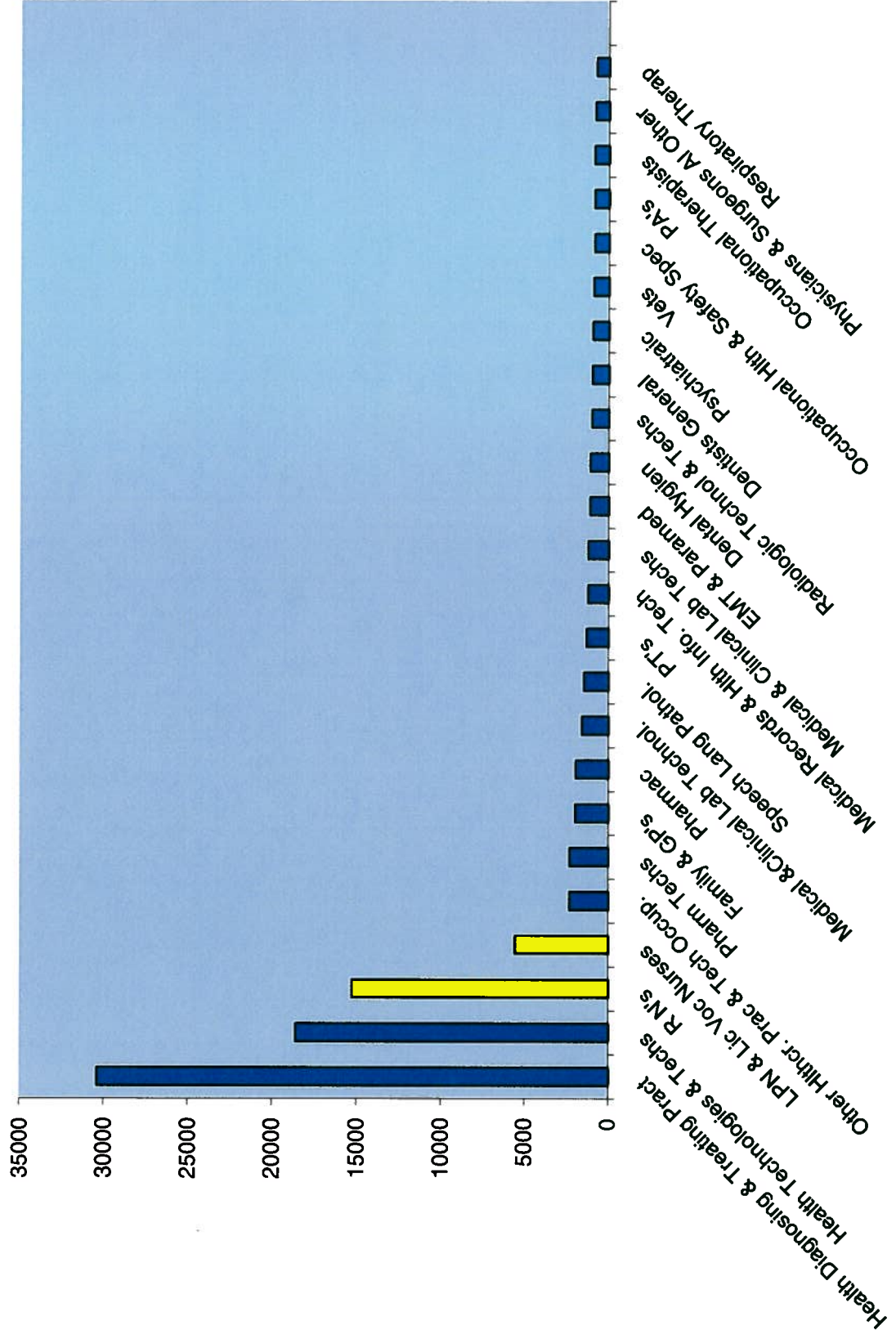
- Currently 16,023 registered RNs have residence in New Mexico, of which 9,695 are practicing full-time and 2,931 are part-time employed (total 12,626).
- Currently 2,960 registered LPNs have residence in New Mexico, of which 1,685 are practicing full-time and 442 are part-time employed (total 2,127).<sup>v</sup>

### Demand/Supply Gap: Registered Nurses

Given the NMDWS 2006-2016 demand projections of (15,259 for RNs and 5,558 for LPNs) and the number of nurses currently practicing in New Mexico (12,626 for RNs and 1,685 for LPNs), it appears there is a current shortage of -2,633 for RNs and -3,431 for LPNs respectively. In addition, the number of projected annual job openings in 2016 for RN's is 496 and 165 for LPNs.

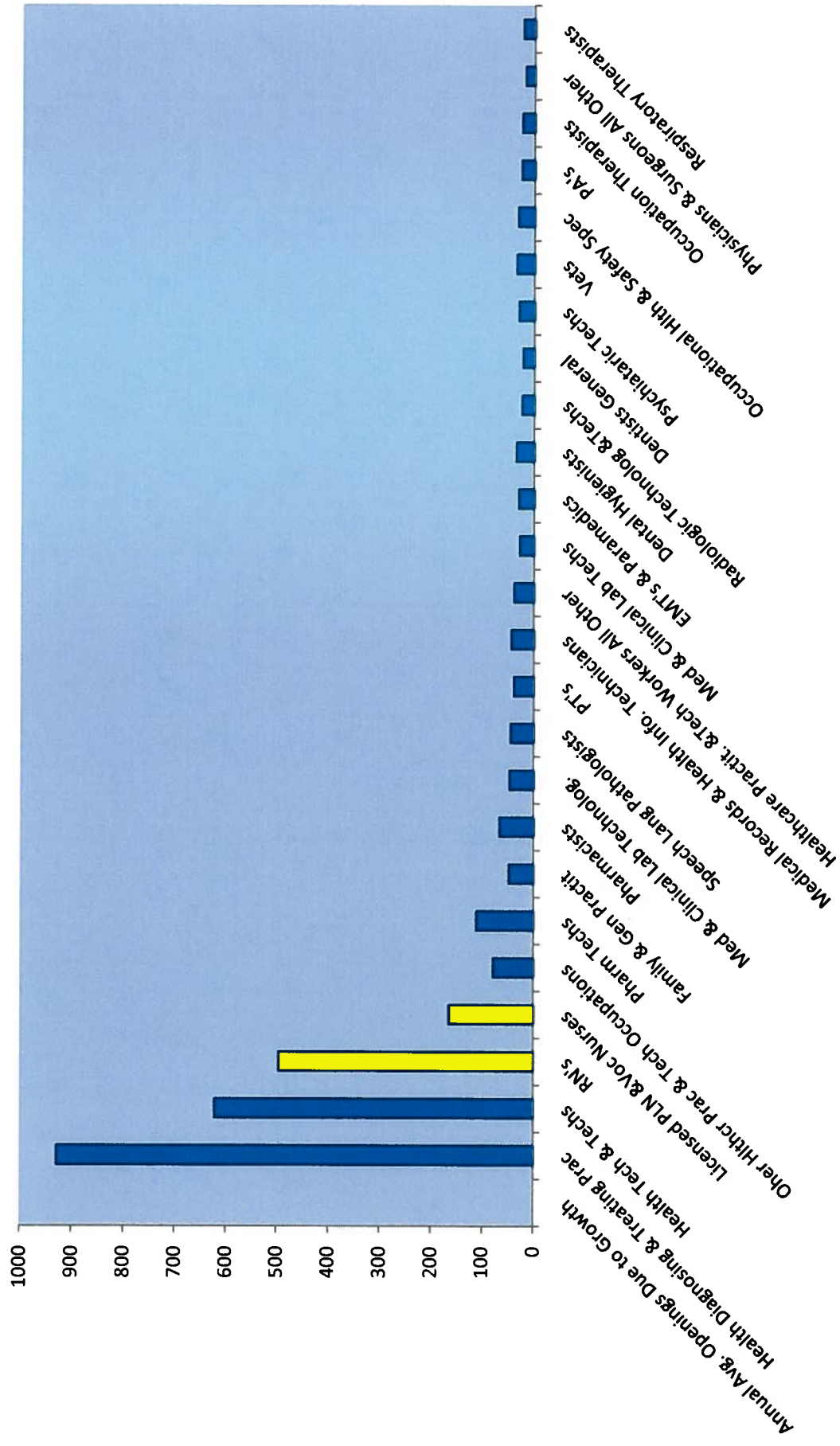
These figures however, do not take into account retirees nor those who will exit the industry. The nursing shortage is caused by a variety of factors affecting both the supply of nurses and the demand for health care services. These factors include:

**New Mexico Occupational Projections 2006-2016: Top 25 Health Related Careers (figure 1)**



# Total Annual Job Openings 2006-2016: Top 25 Health Related Careers

(figure 2)





- The aging of New Mexico's general population;
- The aging of New Mexico's nurses;
- The under-representation of minorities and men among New Mexico's nurses;
- Nurses leaving the profession because of dissatisfaction with working conditions;
- The impact of nurses' salary and benefits on the ability to recruit and retain nurses;
- Nursing education programs having limited capacity to expand enrollments; and
- Nursing viewed unfavorably by young people making decisions about a career.

The Health Resources and Services Administration forwarded a more conservative "supply/demand" model that takes into account such attrition issues. According to this model, the projected 2015 supply/demand gap for RNs in New Mexico is -4,600.<sup>vi</sup>

#### Baseline FTE Supply and Demand, 2010 and 2015

State	2010	2010	2010	2010	2015	2015	2015	2015
New Mexico	Supply	Demand	Supply - Demand	Supply / Demand	Supply	Demand	Supply - Demand	Supply / Demand
	11,000	14,100	-3,100	78%	11,300	15,900	-4,600	71%

Therefore, to address the shortage, we must alleviate the current deficit, which currently is 2,633 for RNs and 3,431 for LPNs, and then continue to produce a net gain of more than 496 RNs and 165 LPNs per year. Our current three year production average for RNs is 643 and 166 for LPNs. These are individuals who have passed the National Council Licensure Examination (NCLEX).

If the model is correct, New Mexico we will address the projected a shortage for RNs in approximately 11 years, but it will take 20 years to simply alleviate the current deficit for LPNs! Obviously, it is significant news that the shortage of nurses is being addressed, but we need to expand our efforts.



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## NEW MEXICO INVESTMENT

The State of New Mexico offers many incentives to encourage individuals to pursue nursing education. Some have been in existence for many years, while others have emerged over the last two years to address the increasing demand for nurses. These incentives may provide financial assistance to nursing students or funding directly to nursing programs to improve nursing retention, purchase equipment for labs, or provide other program enhancements. From FY04 to FY09 over approximately \$16 million has been allocated to New Mexico's public postsecondary institutions in supplemental funding for nursing program enhancement. In addition, \$1 million has been allocated for faculty salary enhancement to institutions by formula. Additional funding has been distributed to individuals through the state's financial aid and nursing loan-for-service and nurse educator's loan-for-service programs. Funding for these initiatives comes from a variety of sources including: state general funds, federal grant funds, state special funds, and private funds. Descriptions of the financial incentives are presented in detail below.

### A. Nursing Program Development Enhancement Fund

The funding for this program was initiated in 2003 with a total amount of \$2 million distributed to sixteen different institutions. Most recently (2008), a total of \$7 million was awarded via a two-year allocation to eighteen different institutions via a competitive process, in which the universities responded to request for proposals and were subsequently evaluated. This program allows New Mexico's public colleges and universities to support the expansion of nursing programs by providing salaries for more nursing instructors and/or expanded facilities and increasing the number of graduates in the field of nursing. In addition, funds have been utilized for the recruitment and retention of quality faculty, staff, and students; student stipends; lab equipment; and professional development and student preparation and retention efforts.

### B. Nursing Faculty Enhancement Program

This program funding is disseminated by formula to institutions to provide a supplemental compensation package for nursing faculty and staff at public postsecondary institutions. The state has provided supplemental funding in the amount of \$500,000 in FY07 and FY08 to institutions in an effort make faculty salaries more competitive with the market.

### C. Nursing Loan-For-Service Program

Established in 1987, the purpose of the Nursing Loan for Service is to increase the number of nurses in areas of the state which have experienced shortages by making educational loans to students entering nursing programs. The award amounts are \$12,000 per year. A student may receive an award up to four years. As a condition of each loan, the student shall declare their intent to practice as a health professional in a designated shortage area. For every year of service, a portion of their loan will be forgiven. The maximum a student must provide service is 3 years. If the entire service agreement is fulfilled, 100% of the loan is eligible for forgiveness.

Since inception through FY08, there have been 436 nursing students who have received over \$3.5 million in service-based student loans. Of the 436 students, nearly 40% have completed their service obligation to the state, 25% are still enrolled in the nursing program, in grace period or are currently fulfilling their service obligation and 35% are in repayment status.



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#### **D. Nurse Educator Loan-For-Service Program**

Established in 2006, the Nurse Educator Loan for Service's purpose is to enhance the ability of college- and university-employed nursing educators to obtain Bachelor of Science, Master of Science and Doctor of Philosophy degrees. The loan is for \$5,000 per academic year. As a condition of each loan, the student shall declare intent to serve in a nurse faculty position in a New Mexico public, post-secondary institution. For every academic year of service, a portion of the loan will be forgiven. If the entire service agreement is fulfilled, 100% of the loan is eligible for forgiveness.





## NEW MEXICO'S PUBLIC HIGHER EDUCATION NURSING PROGRAMS

### New Mexico Nursing Programs Enhanced Degree Education Programs (RNs only)

#### Doctor of Philosophy in Nursing Programs

- University of New Mexico
- New Mexico State University

#### Master's Degree Programs

- University of New Mexico
- New Mexico State University

#### Baccalaureate Degree Completion Programs

- University of New Mexico
- New Mexico State University
- Eastern New Mexico University
- Western New Mexico University
- New Mexico Highlands University
- Northern New Mexico College

#### Baccalaureate Degree Programs

- University of New Mexico
- New Mexico State University

#### Associate Degree Programs

- San Juan Community College
- University of New Mexico-Gallup
- Central New Mexico Community College
- Santa Fe Community College
- Western New Mexico University
- Dona Ana Community College
- New Mexico State University-Alamogordo

#### Career Ladder Programs (1year LPN; 2 year ADN)

- New Mexico Junior College
- New Mexico State University-Carlsbad
- Eastern New Mexico University-Roswell
- Luna Community College
- Northern New Mexico College
- Clovis Community College
- Central New Mexico Community College

#### Practical Nurse Programs

- Central New Mexico Community College

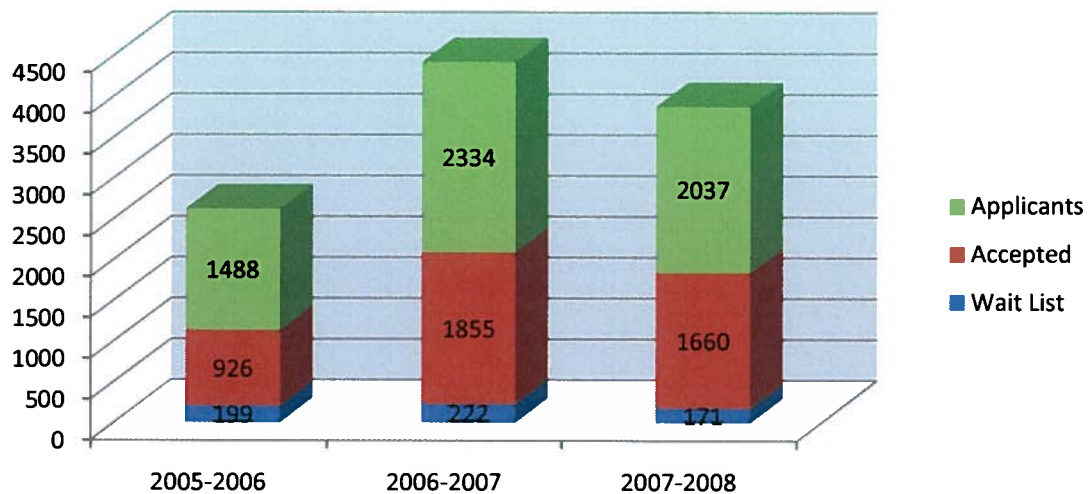


## RESULTS OF NEW MEXICO INVESTMENT

In an effort to better determine the impact our state investments, particularly the NPDEF, are making on the production of nurses, we forward trend data regarding applicant/wait list, enrollment, graduation, NCLEX passage and student diversity.

### Applicant and Wait List Data

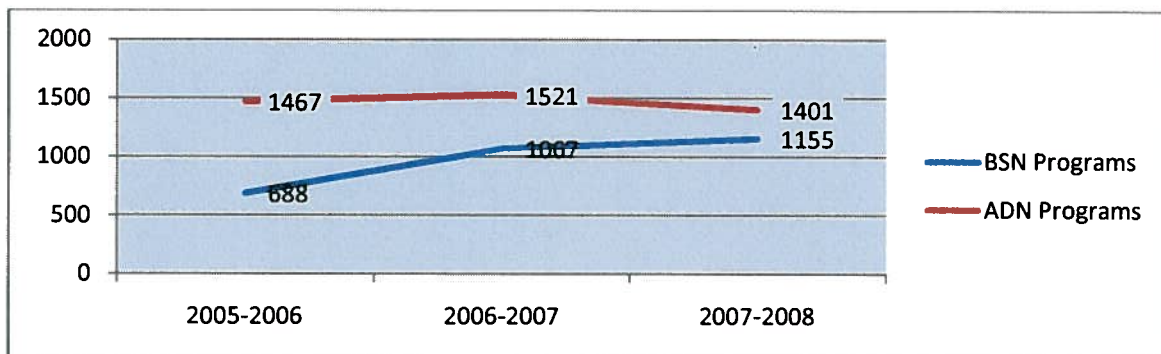
At a time when there is a critical unmet demand for nurses, New Mexico nursing programs are admitting more applicants into their programs and waiting lists are decreasing. From FY06 to FY08 the number of qualified applicants increased from 1,488 to 2,334 in 2006 then fell to 2,037 in 2007. A total of 926 applicants were accepted into nursing programs in 2005, increasing to 1,855 in 2006 falling to 1,660 in 2007. Wait lists have remained relatively low. If school capacity continues to increase, the wait lists will decrease further (**figure 3**).



(Figure 3) Nursing Program Capacity – Qualified Applicants/Accepted 2005-2008

### Enrollments in New Mexico's Nursing Programs:

During the period of FY06 to FY08 there was an overall increase in declared BSN program enrollment. During the same period, declared ADN program enrollment increased slightly, then decreased (**figure 4**).



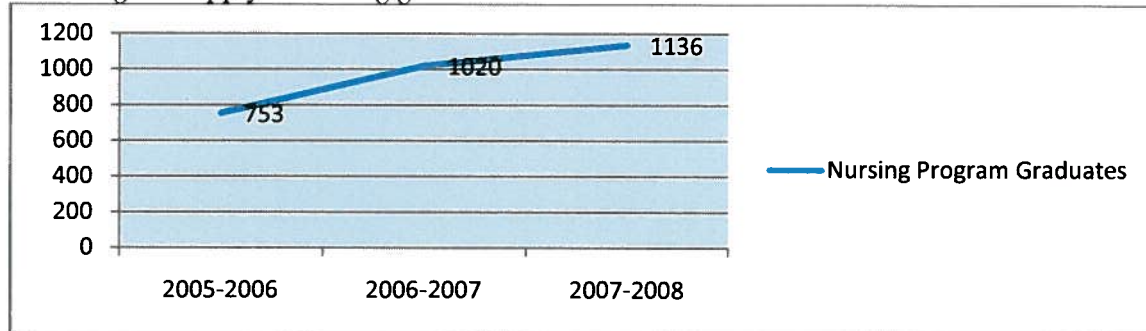
(Figure 4) Declared Nursing Program Enrollment Numbers





#### Trends in Graduates of New Mexico's Nursing Programs:

In FY08, a record 1,136 nursing graduates were produced by both LPN and RN nursing programs, 29 of which were Nursing Loan-for-Service students. From FY06 to FY08, a 51% increase in total graduates was reported, 753 in FY06 to 1,136 in FY08 (**Figure 5**). New Mexico's public higher education institutions are responding to the demand for nurses by significantly increasing the supply of nursing graduates.



(Figure 5) New Mexico's Public Nursing Program Graduates

#### Trends in NCLEX Pass Numbers

Although graduation numbers are a key indicator of progress, perhaps the major indicator is that of board licensure passage. Trend data regarding first time NCLEX pass numbers and actual entrants into the workforce indicate an overall increase in the number of students passing; however, the overall pass rates have decreased. Earlier diagnostic testing and additional student support services are recommended to address this issue.

##### **RN NCLEX:**

- In the 2007-2008 academic year, 693 of 847 students passed the NCLEX which is a slight decrease from the previous year (734 out of 847), however a significant increase from the 2005-2006 year, which was 504 out of 568. The decrease in performance may in fact be due to an increase in exam standards, which became effective in 2007.

RN NCLEX PASSING RATES FOR FIRST YEAR EXAM TAKERS			
ACADEMIC YEAR	2005/06	2006/07	2007/08
NUMBER OF EXAM TAKERS	568	847	847
NUMBER WHO PASSED	504	734	693
FIRST YEAR PASS RATE	88%	86%	81%

##### **LPN NCLEX:**

- In FY08, out of 191 students, the number of candidates who passed the NCLEX exam was 187 which is a record high and an increase from FY06, which were 171 out of 175.

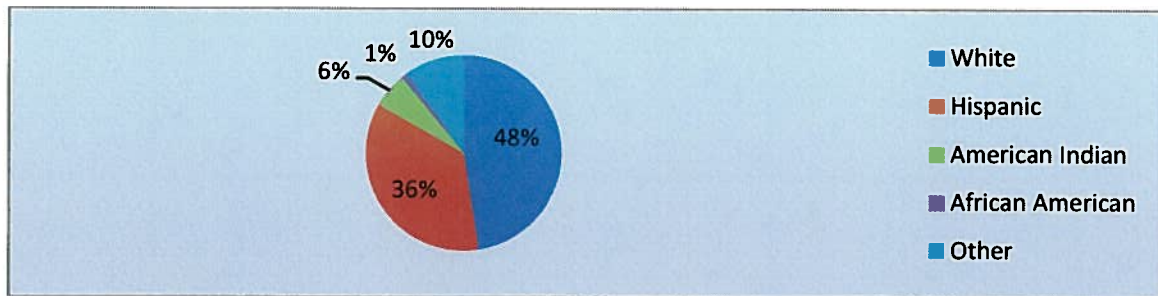
LPN NCLEX PASSING RATES FOR FIRST YEAR EXAM TAKERS			
ACADEMIC YEAR	2005/06	2006/07	2007/08
NUMBER OF EXAM TAKERS	175	142	187
NUMBER WHO PASSED	171	141	183
FIRST YEAR PASS RATE	97%	99%	97%



### Nursing Student Diversity

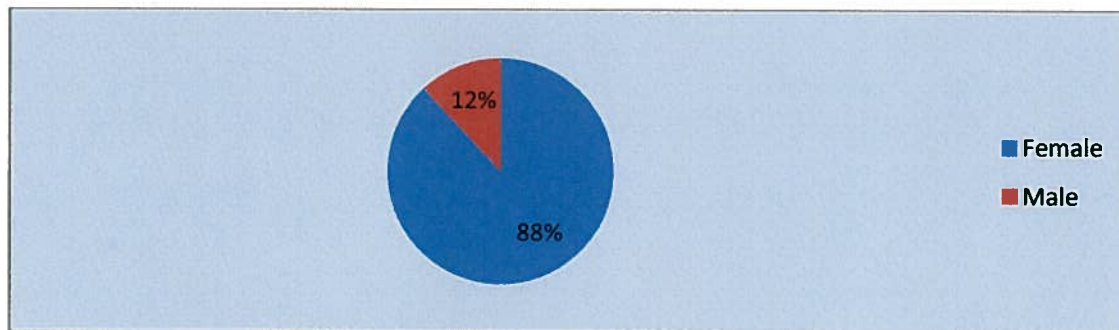
Diversity of Nursing Students: Recruiting and enrolling a diverse nursing student population is particularly desirable in order to: (1) develop the maximum pool of qualified applicants to go into nursing and (2) provide healthcare services to an increasingly racially and ethnically diverse New Mexico citizenry. Regarding Hispanic and Native American nursing enrollment, from FY06 to FY08, Hispanic student enrollment has decreased while Native American student enrollment has increased: FY06 1212 Hispanic/ 142 Native American to FY07 Hispanic 1290/Native American 171 to FY08 Hispanic 1093/Native American 175.

Provided below is the break-down by race and gender of students enrolled in registered nursing programs in FY08. In FY08, 3,058 students enrolled in FY08 nursing programs (this figure includes those who had not yet declared a specific nursing program). Forty-eight percent (48%) were white, thirty-six percent (36%) were Hispanic, six percent (6%) were American Indian and one percent (1%) were African American (figure 6).



(Figure 6) Nursing Program Enrollment by Race – FY08

Nursing student enrollment continues to be predominately female. In FY08, males represented only twelve (12%) of nursing students while eighty-eight (88%) of the students enrolled in public nursing programs were female (figure 7).



(Figure 7) Nursing Program Enrollment by Gender – FY08



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## CURRENT STATE

### Obstacles to Expanded Capacity of Nursing Programs

In November 2008, the NMHED conducted a survey of nursing deans and directors at New Mexico's public higher education institutions with nursing programs. Information was received relative to the following topic areas:

- Student enrollment and demographic data;
- Faculty information; and
- Strategies to reduce student waiting lists and obstacles to program expansion

The top obstacles to program expansion listed were (1) a deficit of qualified faculty; (2) difficulties in obtaining clinical sites for student experience; and (3) general challenges regarding student preparedness and remediation.

### Nurse Educator

Nursing education system capacity is defined as the ability of nursing education programs to admit and accommodate the maximum number of students in a given academic year. Since FY06, enrollment in New Mexico's public nursing education programs has been increasing, pushing many programs to maximum capacity. The ability of our nursing schools to meet the increasing demands for educating greater numbers of nursing students is not increased if they are not able to meet this capacity threshold.

One of the most significant challenges impacting nursing education program capacity is the growing shortage of qualified faculty available to teach. In 2001, New Mexico's nursing programs reported 23 vacant nursing faculty positions<sup>vii</sup> and in 2004 46.5 vacant faculty positions were reported<sup>viii</sup>. More recently, ADN programs reported a 10% vacancy rate of budgeted positions while the BSN programs had a 13.5% vacancy rate.<sup>ix</sup> Almost all nursing programs reported full-time faculty vacancies or difficulty in finding ideally qualified candidates.

Shortages in the number of qualified nurse educators have been attributed to a combination of factors and include reports that the pool of master's and doctoral program graduates in nursing is not large enough to meet the demand for new faculty. The shortage is further heightened due to needs for replacing aging and retiring faculty. In New Mexico, on average, 25% of full time faculty will retire within 5 years (25-31% for ADN; 21-27% for BSN)<sup>x</sup>. This pool of potential faculty is further diluted as masters-prepared nurses choose employment in non-academic areas where compensation and work responsibilities are more appealing.

### Nurse Educator Loan for Service

Attracting new nurses to pursue careers as nurse educators is becoming increasingly difficult due to barriers which limit access to advanced nursing degree education (i.e., clinical nurse specialist, nurse anesthetist, nurse practitioner, or a midwife). Notwithstanding, the American Association of Colleges of Nursing (AACN) passed a resolution to support the doctor of nursing practice (Ph.D) as the terminal practice degree by 2015. Nursing doctoral programs fall into two categories: research-focused and practice-focused. The research-focused programs grant the Doctor of Philosophy; these programs focus heavily on scientific content and research methodology. Practice-focused doctoral programs are designed to prepare experts in specialized advanced nursing practice. The practice-focused practitioner focuses on innovative and evidence-



based practices reflecting credible research findings. The impact of the 2015 terminal degree requirement remains to be seen, however, we can assume there will be a strong demand for nurse educators to meet the faculty shortage at our institutions.

We can also expect another set of challenges with the transition requirement for the nursing community which is that there are presently only 351 schools in the country that offers a Master of Science degree with 25% of those offering a doctoral degree as indicated by the AACN. (It is worth noting both New Mexico State University and the University of New Mexico offer a Master's of Science and Doctor of Philosophy program.) With the forthcoming 2015 transition deadline in mind and the current nursing shortage New Mexico is facing, NMHED's Health Advisory Committee worked closely with the HED Financial Aid Division, the division that administers the state's loan for service programs, to expand the Nurse Educator Loan for Service program and seek additional dollars. In FY09, the annual appropriation was increased to \$166,500 from \$66,500; this supports additional slots into the nursing faculty pipeline each year. The Financial Aid Division is working with the Health Advisory Committee and other state agencies to research best practices in an effort to find what may further incent individuals to enroll in the state's Nurse Educator program.

In addition to these factors, attracting new nurses to pursue careers as nurse educators is becoming increasingly difficult because of barriers which limit access to advanced nursing degree education. The burden of financing master's degrees in nursing while maintaining living expenses and benefits is particularly challenging. New Mexico's Nurse Educator's Loan-for-Service program has helped in this area. The purpose of the program is to enhance the ability of college- and university-employed nursing educators to obtain Bachelor of Science, Master of Science and Doctor of Philosophy degrees. As a condition of each loan, the student shall declare his/her intent to serve in a nurse faculty position in a New Mexico public, post-secondary institution. For every academic year of service, a portion of the loan will be forgiven. If the entire service agreement is fulfilled, 100% of the loan is eligible for forgiveness.

Faculty salaries also contribute to the problem. Newly graduated nurses often earn more than the faculty who trained them, and many nurses who desire to teach simply can't take the reduction in salary. ADN nursing faculty averaged \$44,462 compared to the community equivalent salary reported as \$71,500. The BSN faculty salary of \$76,000 compared to the community equivalent salary of \$80,000 did not show the same disparity as the ADN faculty. A UNM BBER report discussed wages of RNs in clinical practice compared to nursing instructors.<sup>xi</sup> In FY07 and FY08, the state provided an additional \$500,000 in supplemental funding to nursing programs in an effort make faculty salaries more market competitive. According to nursing program directors, the additional supplemental funding has been successful in helping the nursing programs attract and retain faculty.

### Clinical Education

Clinical education is a vital experience that enables all nursing students to fully integrate classroom and clinical knowledge in the health care environment. Students learn how to make vital health care decisions and administer patient care while working side-by-side with health care professionals from a variety of disciplines and institutions.





In surveying the state's nursing program directors, lack of clinical space was listed as a common barrier to program expansion. The ability of nursing programs to expand to meet the demand for additional nursing graduates, while obtaining adequate space for clinical education is threatened due to a lack of sufficient clinical site placements.

In light of the growing clinical site shortages and reduced patient volume, many schools are experimenting with the use of technology to provide immediate solutions for reducing demands on clinical faculty by introducing virtual learning to support clinical education.

Just to be clear, there is a difference between virtual learning, which is done with a computer, and simulation. Although simulation increases the need for faculty, it enhances the clinical site experience by providing scenarios/situations that may not be available to the student in the clinical setting. Simulation does not replace clinical site experience. Nursing is a hands-on people profession, and students need the clinical experience to learn the human side of caring.

Simulation is an educational methodology designed to provide learning exercises that closely mimic real life situations. Simulation education utilizes computerized mannequins and multimedia applications to enhance programs, student learning, and allow students to practice their skills in simulation environments prior to interacting with an actual patient. Nursing programs are turning to this innovative education method and are increasingly investigating implementing simulation technology into nursing education and training curricula.

Another innovative approach to clinical education is currently being practiced at Portland State University in Oregon and the University of Buffalo in New York is the Dedicated Education Unit. Developed at Flinders University in Australia, this approach involves a partnership among hospital administrators, nurse-clinicians and academic faculty. Specially trained hospital-based nurses act as staff clinical instructors, sharing their clinical experience, knowledge and expertise with the student nurses. These instructors are matched with two student nurses, who receive personalized attention and instruction in each hospital specialty unit. The model allows each student to develop a one-on-one relationship with the staff nurse instructor, and provides more opportunities to use critical thinking at the bedside and to develop the complex nursing care required by today's health-care consumer.

The NMHED is supporting these efforts by forwarding best practices to nursing program directors and encouraging the coordination of simulation faculty development opportunities plus allocation through the NPDEF assisting nursing programs incorporate simulation technology into their curricula and purchase equipment.

#### Student Preparedness

Strategic outreach plans and special efforts to encourage the multicultural attraction and development of nursing students and nursing faculty are extremely important and need to be expanded in order to continue to build a nursing workforce which more accurately reflects the demographic make-up of the state. Males, as well as racial and ethnic minorities, are under-represented in the nursing population of New Mexico. This void presents a significant opportunity to engage a new pool of talent whose representation is critical in meeting the continued demand for nurses across the state.



Although nursing program enrollment and graduation numbers have increased, especially within under-represented populations, NCLEX passage rates have declined. This seems to suggest challenges in the area of student retention and overall student quality. In fact, many of the NPDEF proposals from our nursing programs indicated poor student performance and specified funding to be utilized in the area of remedial support services.

Lack of academic preparedness in the sciences and English, poor career preparation offered by high school counselors, and financial constraints are all contributors in negatively affecting a student's ability to succeed in nursing programs.

To combat rising attrition rates, nursing faculties have structured formal and informal support programs intended to bolster academic skills, address nursing knowledge deficits, and facilitate social support systems within the collegiate environment. Many of these remediation programs have been implemented in the final semester of the nursing program, and they have focused on student weaknesses in specific NCLEX content categories.

While evidence exists indicating that remediation positively affects NCLEX success in students with known academic deficits, our programs are in search of specific benchmarks that identify students who are at risk of NCLEX failure and in need of remediation. A new and growing trend among nursing faculties is to set benchmarks that contain progression-to-graduation requirements based on student performance on standardized nursing exams that allow for comparison with national norms. These policies are designed to identify students who are in need of remediation prior to graduation and NCLEX candidacy so that remediation can be initiated early and NCLEX failure avoided. For reasons of convenience, many nursing programs have increasingly selected computerized NCLEX simulation exams, not only because they can provide instant scoring data, but also because they can simulate the Computerized Adaptive Testing (CAT) format of the NCLEX. The Health Education Systems, Inc (HESI) Exit Exam (E<sup>2</sup>) is one such exam that several of our institutions are utilizing. In particular, some of our institutions report students having difficulty passing the HESI exit exam thus impacting their ability to graduate and obtain nursing jobs. This is problematic as they were taking the exam their senior year. Earlier diagnostic testing would be beneficial.



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## WHAT WE NEED TO DO NOW

By 2020, New Mexico will be faced with a convergence of an aging nurse population – resulting in decreased supply – and an aging general population – resulting in increased demand. Combined with the unresolved existing shortage, the result will be a critical deficiency of qualified, experienced nurse workforce. Continued commitment and purposeful interventions on the part of key stakeholders are essential to assure that the needs of all New Mexicans are met.

The NMHED has identified three critical issues as essential to successfully resolve the nursing shortage. Presented with each are key stakeholder activities recommended to address the issue.

### Retention of Nurses Currently in the Workforce

Successful resolution of the nursing shortage must involve parallel strategies: retention of the current workforce and increased production of the future workforce. Acceptance of the need to make significant improvements in the work environment and a global approach to increased retention of the existing workforce has, to date, remained limited. It is imperative for individual nurse employers to implement programs to address this issue. This includes salaries that are competitive not only regionally, but nationally as well. In addition, creating and sustaining positive environments for nurses to work. This is a great challenge in that national estimates suggest that 50% of new nurses leave direct care within the first two years of practice. As nurses age the physical demands of practice can be daunting and the ability to and interest in working 12 (or more) hour days wanes. The movement of experienced, senior nurses out of direct care roles results in a critical loss of knowledge and skills. With this loss of experiential knowledge, there is no one to orient and develop the large influx of new nurses resulting from the focused effort to increase capacity in our nursing education programs. Thus, the cycle continues. Some suggestions for nurse employers to address this issue include:

- Change the work culture in nurse employment settings based on input from nurses and analysis of issues specific to a given environment
- Implement new strategies to improve the work environment such as shared governance, flexible scheduling and ergonomic designs.
- Develop consortiums for problem identification, intervention development, and sharing of successful practices

### Maximizing Capacity of Nurse Education Programs

Increasing the production of new nurses, in and of itself, will not achieve the goal of assuring New Mexicans a sufficient and qualified nursing workforce. Simply adding new programs, increasing funding for existing programs, and/or conducting clinical training on nights and weekends does not guarantee student success. To increase production of new nurses there must be increased admissions, increased graduations and increased successful passage of the NCLEX. Spreading resources too thin in our academic settings (i.e.: faculty; clinical experience; qualified preceptors) by over-emphasizing admissions through unconstrained approval of new programs and expansion of capacity in existing programs has resulted in *decreasing* NCLEX pass rates for nursing graduates in New Mexico. We must make the best use of our existing nursing education programs by providing the resources that can increase the end product – a licensed nurse. This means continuing to address the nurse faculty shortage, assuring appropriate clinical experiences, and providing student support and remedial services. There are many barriers to retention, some of which include students having an unrealistic expectation of curriculum and



the field of nursing in general and decide after a couple of semesters to pursue another field of study and/or students who are single parents and have jobs in addition to their coursework. The NMHED is encouraging our state's nursing programs to continually evaluate their programs and students in an effort to increase both recruitment and retention of quality nursing students. This may involve the inclusion of mandatory courses in the initial semester of the program that teach study skills along with stress and time management, providing specialized remedial courses for struggling nursing students, and focused student advisement. Studies have shown that when students feel a connection with their adviser, they are more likely to stay in school and be successful. Other suggestions to address this issue include:

- Establish incentives for education programs to decrease student attrition and increase NCLEX pass rates for first time test takers.
- Continue funding incentive programs such as the nurse educator loan for-service to encourage pursuit of graduate nursing degrees that prepare individuals to become faculty at universities and community colleges.
- Encourage nursing programs to implement market driven pay structures and appropriate budget for nurse education programs. Nurse education program administrators must evaluate current curricula and implement changes to maximize outcomes that lead to NCLEX passage.
- Develop regional consortiums of nursing education programs to share critical faculty (clinical specialties) and advanced technology (simulation equipment and distance education).

### Nursing Pathways

In an effort to facilitate more effective nursing pathway initiatives, the NMHED has spearheaded a RN to BSN nursing articulation initiative designed to facilitate the automatic transfer of agreed-upon courses from one institution to another. More specifically, the "transfer module" is intended as a guide for RN students interested in transferring from one four year institution to another four year institution to obtain a BSN degree. Eastern New Mexico University, New Mexico Highlands University, New Mexico State University, Northern New Mexico College, University of New Mexico and Western New Mexico University offer the BSN degree completion option for RNs. The Articulation Task Force has clarified exactly which courses and course modules transfer automatically. Next steps include articulation with private postsecondary nursing programs, then two year and secondary programs. Given the geographic realities in New Mexico and the large number of people living in rural areas, it is important that courses students take at a local branch or community college transfer to the four year institutions. Representatives from colleges, universities, technical institutes and the state are involved in this initiative in an effort to develop a procedure for institutions to submit courses to be included in a commonly accepted general education core. In addition to the two to four year articulation efforts, the NMHED is also developing a framework for dual credit opportunities between our secondary and two year programs as well. Work has begun with New Mexico State University-Alamogordo as well as Santa Fe Community College and Western New Mexico University.

### Statewide Strategic Planning

Efforts initiated with the intent to address the nursing shortage in New Mexico must be fiscally sound with predictable outcomes that will achieve the desired goal(s). As a state, New Mexico is highly diverse with variances in population demographics and needs from the urban centers to the rural areas. The supply of and demand for nurses is also varied throughout the regions of our





state. What is constant is that there is a shortage of qualified nurses. How to approach resolving that shortage must reflect the available resources (human and fiscal) and identified needs of each region. Decisions must be based on valid information regarding trends in the supply of nurses (i.e.: current, active licensees; graduates from area education programs) and demand for nurses with consideration of nurse employing industries (i.e.: acute care hospitals; home health agencies; skilled nursing facilities; public health departments; hospice). For example, nursing education program expansion decisions should be based on an identified need for additional new graduate RNs in the school's region and validation of access to needed resources such as qualified faculty and clinical space. However, if there is a greater need in the given region for experienced critical care nurses, funds should be directed to certification programs and training to transition already licensed RNs to work in critical care settings.

With this in mind, The New Mexico Board of Nursing and the New Mexico Center for Nursing Excellence sponsored the "Moving from Talk to Action; Building Community Plans for a Strong Nursing Workforce" community forums. Facilitated by New Mexico First, six regional forums were held throughout New Mexico from June through September, 2008. The focus of these forums was to agree on a structure and process for "owning" the recommendations to address the nursing shortage and championing their implementation. The forums were held in Albuquerque, Clovis, Española, Gallup, Las Cruces, and Roswell. The 135 people who attended came from 24 different communities in New Mexico and included state policymakers, community leaders, community health council members, nursing administrators and managers from a variety of healthcare employers, nursing educators, college and university administrators, and staff nurses from various disciplines.

The New Mexicans who participated in the forums made it clear that they are ready to form community action teams and work in collaboration with a state action team to share responsibility for the recommendations that have already been made for nursing education, recruitment, and retention, champion their implementation, and alleviate the nursing shortage.

Participants evaluated 52 recommendations and specified which ones should be the responsibility of the state action team, the community action teams, or a shared responsibility. The communities represented at the forums believe that the state action team can be most helpful in alleviating the nursing shortage if they address the recommendations that secure the funding needed to support nursing students and faculty. The top five priorities include:

- Increase funding for nursing programs and add funding to the general budget
- Increase funding for nursing education expansion
- Increase stipend/number of loan-for-service programs and tie to masters programs
- Develop funding formula for nursing faculty to increase baseline salaries
- Make Nurse Education Fund permanent and recurring and establish criteria for disbursement of funds

Once formed and operational, the state and community teams will assess priorities, assign roles and responsibilities, and advance the recommendations with policymakers, community leaders, and the public.<sup>xii</sup>

In addition to the community forums, the NMCNE convened a legislative collaborative group designed to determine legislative initiatives required to support nursing for the 2009 New Mexico



legislative session. Meeting throughout the fall of 2008, collaborative members included leaders from nursing education, nursing administration, the NMHED, the New Mexico Nurses Association, the New Mexico Organization of Nurse Executives, the New Mexico Hospital Association, and the New Mexico Health Care Association. Participants were from Albuquerque, Las Cruces, Carlsbad, and Santa Fe.

### Cultural Competence

Consistent with the state's commitment to diversity issues in education, Senate Bill 600 mandated that the NMHED form a Cultural Competence Task Force to study and make recommendations on specific cultural competence curricula for each health-related education field offered in New Mexico's public post-secondary educational institutions (. A nursing education subcommittee forwarded specific recommendations for integrating cultural competence into nursing education curriculum and includes:

- Both two and four-year nursing programs should review the four core competencies developed by this taskforce (socio-cultural factors in health care delivery, population health disparities, intercultural communication and historical trauma) and define activities and outcomes expected from each program for each of the core cultural competencies.
- Explore nursing-based cultural competence assessment tools, and discuss the possibility of having nursing programs use a standardized measure of cultural competence across schools.
- Develop a statewide cultural competency speakers' bureau comprised of individuals and agencies willing to provide lectures about various cultures in New Mexico, including historical and contemporary perspectives
- Create a web-based database of resources on mental health issues and cultural competence, including how mental health and treatments are described, observed, and treated in different cultures.
- Develop a web-based cultural competency CEU training.<sup>xiii</sup>

### Other State's Nursing Related Initiatives

In June of 2008, the AARP, the Robert Wood Johnson Foundation, and the United States Department of Labor convened the Nursing Education Capacity Summit comprised of multi-state stakeholder groups to identify solutions to the nurse faculty shortage that is forcing many nursing schools to turn away thousands of qualified nursing candidates each year. Eighteen states participated, including the southwestern regional states of Texas and Colorado. Although New Mexico was not selected to participate directly, the Workforce Education Division's relationship with those who did participate directly has enabled us to become aware of best practices throughout the country. In fact, New Mexico has been invited to participate in a follow up summit in February of 2009. A white paper, *Blowing Open the Bottleneck: Designing New Approaches to Increase Nurse Education Capacity* was released at the June 2008 summit. The paper highlighted programs that are making progress in addressing both shortage and education capacity problems in nursing. The areas of best practice include:

- Creating Strategic Partnerships to Align and Leverage Stakeholder Resources;
- Increasing Nursing Faculty Capacity and Diversity
- Redesigning Nursing Education
- Flexing Policy and Regulation



One case study included the state of Oregon in which a consortium on nursing education was formed to create a shared, competency-based entry-level BSN educational curriculum.<sup>xiv</sup> This “pathway” initiative is one the Workforce Education Division is currently studying to possibly expand here in New Mexico as we are in the process of articulating programs between two and four year colleges. In addition, we are monitoring several legislative initiatives designed to alleviate the nursing shortage (**Appendix B**)<sup>xv</sup>.



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## RECOMMENDATIONS

In evaluating the effectiveness of the NPDEF it appears that the public higher education nursing programs are making some progress towards meeting goals identified under the supplemental funding grant:

- *Prepare 11,000 new registered nurses (RNs) to address the shortage in the next seven years (taking into account limited resources, the taskforce set an initial goal average of 400 nurses per year, which will result in a seven year production total of 2,100, far below the stated goal of 11,000. However, this again was an initial step) (Current 3 year production average of 600 per year).*
- *Create a 66/33 balance (66% Bachelor of Science in Nursing (BSN) and 33% Associate's Degree in Nursing (ADN) in the nursing profession since it directly impacts patient care. (The current BSN rate is 35%). (Current 3 year average of 40% BSN/60% ADN enrollment, however current 2008 enrollment is 45% BSN/55% ADN).*
- *Educate new nurses to provide care for 2010 and beyond that will include innovations in nursing practice. (New Mexico's nursing programs utilize new cutting edge technologies in educating students).*
- *Increase the number of nurses serving underserved populations and nurses from underserved populations (particularly Hispanics and Native Americans). (Hispanic student enrollment has decreased while Native American student enrollment has increased: FY06 1212 Hispanic/ 142 Native American to FY07 Hispanic 1290/Native American 171 to FY08 Hispanic 1093/Native American 175).*
- *Create collaborative partnerships among 2-year/4-year institutions, hospitals, other public/private sectors that will enhance statewide nursing programs. (New Mexico's nursing programs have developed collaborative partnerships with institutions in the form of articulated pathways and with hospitals in the form of clinical space).*

Although we have seen an increase in the number of students entering our nursing programs and even graduating, we must ensure that the capacity of our programs is not only large enough to accommodate all prospective nursing students, but we must also strive to improve the quality and performance of our students resulting in passage of the NCLEX. With this in mind, we have formulated a set of short and long-term recommendations.

### Short Term Recommendations

- Encourage career pathways for MSN and doctoral educators who will teach in nursing programs, with particular emphasis on the attraction of minority and non-traditional nurse educators
- Encourage and facilitate the development of dual credit and articulated nursing career pathways throughout the entire state
- Partner with employers for regionally coordinated clinical assignments
- Improve NCLEX pass rates by improving retention rates for nursing students, placing emphasis on targeted advisement, early diagnostic testing and remedial support systems



- Expand nursing student loan for service and faculty loan for service to allow loans for nursing education from any accredited school, with payback tied to state service
- Expand outreach and marketing of the nurse educator program throughout the state using healthcare networks

In outlier years, when additional funding becomes available, the following long-term recommendations are forwarded. Specifically regarding the NPDEF, the NMHED will continue awards based upon the ratings established by our review committee, with particular emphasis placed on student performance and retention rates. Overall, the NMHED will continue to monitor the performance of nursing programs and assist in facilitating collaborative relationships between our secondary, two-year and four-year institutions and continue to encourage partnerships with our private sector.

#### Long-Term Recommendations

- Increase faculty salaries through multi-level strategies
- Continue to invest in the integration and shared use of the latest educational technology to supplement traditional clinical education programs
- Support the expansion of practical nursing programs in New Mexico
- Expand the RN to BSN programs to meet projected need
- Expand the University of New Mexico and New Mexico State University doctoral programs and other MSN programs to increase production of nursing faculty



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## APPENDIX A

### NURSING PROGRAM PERFORMANCE AND FUNDING DATA

New Mexico Nursing Data		Central NM Comm. College	Clovis Comm. College	DonaAna Comm. College	Eastern NM Comm. College Portales	ENMU Rooswell	Luna Comm. College	NM Highlands University	NMSU Alamogordo	NMSU Carlsbad	New Mexico Junior College	New Mexico State	Northern NM Comm. College	SanJuan Comm. College	Santa Fe Comm. College	UNM Gallup	University of New Mexico	Western NM University	Totals
<b>2007 - 2008</b>																			
<b>Student Enrollment Data:</b>																			
No. of qualified applicants		450	69	116	51	48	48	15	28	35	42	130	54	106	83	96	627	39	2037
No. of applicants accepted in program		450	69	52	51	48	97	14	28	35	42	96	64	59	66	56	401	32	1660
No. of qualified applicants on waiting list		0	0	68	0	0	4	0	0	0	0	34	14	47	4	0	0	0	171
No. of graduates		201	56	71	18	17	78	N/A	12	19	42	127	38	56	47	41	282	31	1136
<b>Enrollment by Program Type:</b>																			
A D N		286	152	126		79	97	9	56	71	42		64	98	215	56		50	1401
B S N												739					401	15	1155
<b>Enrollment by Gender:</b>																			
Female		345	139	109	49	68		9	47	63	38	807	53	87	199	161	566	57	2797
Male		70	13	17	3	11		0	9	8	4	138	11	11	16	24	55	8	398
Total		415	152	126	52	79		9	56	71	42	945	64	98	215	185	621	50	3180
<b>Enrollment by Ethnicity:</b>																			
White		170	107	37	29	37		5	38	42	22	390	16	57	113	53	335	29	1480
African American		9	6	0	4	4		0	1	0	0	42	0	1	0	5	10	0	10
Hispanic		174	38	77	18	36		4	8	26	20	358	42	14	100	32	167	21	1093
American Indian		27	0	0	0	0		0	0	1	1	17	3	15	0	79	32	0	175
Other		35	1	12	1	2		0	3	1	0	138	2	11	1	16	77	0	300
<b>Student Residency Information:</b>																			
In-State Resident Students		409	133	122	52	79		8	56	71			64	86	215	185		49	1529
Out-Of State Students		6	19	4	0	0		1	0	0			0	12	0	0		1	43
<b>Faculty Information:</b>																			
Total No. of Full Time Faculty		18	11	6	2	6	8		4	7	7		6	11	8		42	6	142
Total No. of Part-time Faculty		23	0	7	4	3	16	2	7	5	1		6	0	15		26	7	122
<b>NCLX Program Summary:</b>																			
No. of RN Candidates		188	52	66		19	54		28	17	34	94	25	28	39	32	148	20	844
No. of Candidates who passed		154	46	36		19	41		25	17	29	86	18	22	31	24	133	12	693
No. of Candidates who Failed		34	6	30		0	13		3	0	5	8	7	6	8	8	15	8	151
No. of LPN Candidates		25	57	2			39			17	34		17						191
No. of Candidates who passed		25	56	2			38			17	34		15						187
No. of Candidates who Failed		0	1	0			1			0	0		2						4
<b>Funding</b>																			
NEGF Grant		150000	230000	50000	239000	138000	100000	130000	85000	130000	165000	500000	187000	219000	160000	230000	500000	287000	3,500,000

New Mexico Nursing Data		Central NM Comm. College	Clovis Comm. College	DonaAna Comm. College	Eastern NM Comm. College Portales	ENMU Roswell	Luna Comm. College	NM Highlands University	NMSU Alamogordo	NMSU Carlsbad	New Mexico Junior College	New Mexico State	Northern NM Comm. College	SanJuan Comm. College	Santa Fe Comm. College	UNM Gallup	University of New Mexico	Western NM University	Totals
<b>2006-2007</b>																			
<b>Student Enrollment Data:</b>																			
No. of qualified applicants		634	69	119	96	38	54		43	44	47	145	39	101	105	124	641	35	2334
No. of applicants accepted in program		634	69	54	96	38	108		43	44	47	96	32	64	49	52	397	32	1855
No. of qualified applicants on waiting list			0	71	0	0	6		0	0	0	49	59	37	0	0	0	0	222
No. of graduates		206	54	72	18	19	93		31	17	34	83	59	28	38	39	208	21	1020
<b>Enrollment by Program Type:</b>																			
A D N		347	227	153		63	93		84	71	47		39	98	191	52		56	1521
B S N					96							652					307	12	1067
<b>Enrollment by Gender:</b>																			
Female		371	147	132	91	57	301		70	66	42	655	52	82	179	155	474	48	2922
Male		66	11	21	5	6	42		14	5	5	101	8	16	12	13	41	8	374
Total		437	158	153	96	63	343		84	71	47	755	60	98	191	168	515	56	3295
<b>Enrollment by Ethnicity:</b>																			
White		179	91	37	68	27	52		58	45	23	332			96	59	273	22	1418
African American		12	11	1	5	3	1		1	0	1	25			1	4	13	0	79
Hispanic		171	56	85	21	31	280		13	26	20	290		14	92	24	134	33	1290
American Indian		32	0	3	1	0	4		3	0	1	12		21	1	70	22	1	171
Other		43	0	27	1	2	7		9	0	2	96		4	1	11	73	0	276
<b>Student Residency Information:</b>																			
In-State Resident Students		430	143	146	92	60	332			71		582	39	87	189	168		56	2395
Out-Of State Students		7	15	7	4	3	11			0		173	0	11	2	0			233
<b>Faculty Information:</b>																			
Total No. of Full Time Faculty		17	10	5	2	6	6		6	7	6		6	9	6		41	8	135
Total No. of Part-time Faculty		23	0	20	4	2	12		6	7	1		6	13	23		34	8	159
<b>NCLX Program Summary:</b>																			
No. of RN Candidates		174	45	64	21	26	29		34	19	38	112	15	64	47	31	126	28	873
No. of Candidates who passed		145	45	40	21	25	24		33	17	28	95	13	59	44	27	119	24	759
No. of Candidates who Failed		29	0	24	0	1	5		1	2	10	17	2	5	3	4	7	4	114
No. of LPN Candidates			52	6			39			20	10		16						143
No. of Candidates who Passed			52	5			39			20	10		16						142
No. of Candidates who Failed			0	1			0			0	0								1
<b>Funding</b>																			
NEGF Grant		185000	215000	165000	110000	112000	195000	64000	165000	165000	115000	741300	60000	150000	247000		707000	100000	3496300



New Mexico Nursing Data															Western NM University	Totals		
2005 - 2006																		
Student Enrollment Data:																		
No. of qualified applicants		65		49		77	34		41	190		132	95	64	711	30	1488	
No. of applicants accepted in program		65		49	40	105	34		41	96		40	50	52	330	24	926	
No. of qualified applicants on waiting list		0		0	0	14			0	94		82	9	0	0	0	199	
No. of graduates		43	91	4	18	86	27		34	83		56	47	37	206	21	753	
Enrollment by Program Type:																		
A D N	359	240	168		62	105	103		41			96	201	52	N/A	49	1476	
B S N				49						302					327	10	688	
Enrollment by Gender:																		
Female	312	132	145	47	58	310	88		35	562		80	186	144	476	40	2615	
Male	47	17	23	2	4	55	15		6	109		16	15	7	44	9	369	
Total	359	149	168	49	62	365	103		41	671		96	201	151	520	49	2625	
Enrollment by Ethnicity:																		
White	145	97	32	36	33	58	44		22	310		65	100	72	309	19	1342	
African American	9	7	3	2	1	0	4		0	21		0	1	0	11	0	59	
Hispanic	141	43	91	11	25	295	27		21	279		6	95	30	121	27	1212	
American Indian	29	2	5	0	0	4	1		1	8		16	2	40	32	2	142	
Other	35	0	38	0	3	7	27		1	63		9	3	9	47	1	243	
Student Residency Information:																		
In-State Resident Students	354	137	159	49	61	362	103					80	201	51	330	49	1936	
Out-Of State Students	5	12	9	0	1	3	0					16	0	0	0	0	46	
Faculty Information:																		
Total No. of Full Time Faculty	16	10	5	2	6	6	4		7			8	6		42	7	119	
Total No. of Part-time Faculty	28	0	22	4	2	12	8		1			12	18		31	2	140	
NCLX Program Summary:																		
No. of RN Candidates	101	47	32		26	32	17	17	27	40		19	30	41	27	99	13	568
No. of Candidates who passed	91	41	24		25	24	16	16	27	39		18	28	37	24	82	12	504
No. of Candidates who Failed	10	6	8		1	8	1	1	0	1		1	2	4	3	17	1	64
No. of LPN Candidates	38	45				31		13	31			17					175	
No. of Candidates who passed	38	45				30		13	29			16					171	
No. of Candidates who failed	0	0				1		0	2			1					4	
Funding:																		
NEGF Grant	250,000	193803	150,000	59,050	98,808	125,000	60,000	150,000	60,000	238,339	60,000	60,000	60,000	125,000	250,000	60,000	2,000,000	



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## **APPENDIX B**

### **NURSING EDUCATION CAPACITY: STATE LEGISLATIVE BILLS 2007-2008**

State	Bill	Bill Status & Sponsor	Comments/ Other Nursing Workforce Bills
Alabama	<p><b>HB 737:</b> increases amt of scholarship for grad degrees. Senate version: 490. HJR 682: recognizing Dr. Fay Raines, Dean College of Nursing at U of A, Huntsville, as Prez of the American Association of Colleges of Nursing</p> <p><b>SB 139:</b> An act to amend Sections 70101, 70106, 70120, 70124, 70125, 78261, 87482, 89267, and 92645 of, and to add Sections 66055.8, 66055.9, 70128.5, 78261.3, and 89267.3 to, the Education Code, and to add Article 5 (commencing with Section 128050) to Chapter 2 of Part 3 of Division 107 of the Health and Safety Code, relating to nursing education. (2) Existing law establishes the Student Aid Commission as the primary state agency for the administration of state-authorized student financial aid programs available to students attending all segments of postsecondary education.</p> <p>Existing law establishes the State Nursing Assumption Program of Loans for Education (SNAPLE), administered by the commission, under which any person enrolled in an institution of postsecondary education and participating in that loan assumption program is eligible to receive a conditional warrant for loan assumption, to be redeemed upon becoming employed as a full-time nursing faculty member at a California college or university.</p> <p>Existing law establishes a loan assumption program for employees of specified state facilities within the SNAPLE program. This program provides loan assumption benefits to persons who fulfill agreements to work full time for 4 consecutive years as clinical registered nurses in state-operated 24-hour facilities, as specified, that employ registered nurses and that, at the time the person commences employment at the facility, have a vacancy rate of greater than 10% in clinical registered nursing positions, as reported, pursuant to the bill, to the commission by the Department of Personnel Administration. The program provides for a progressive assumption of the amount of a qualifying loan over 4 consecutive years of qualifying clinical registered nursing service, up to a total loan assumption of \$ 20,000.</p>	<p>Introduced March 2008, sent to House committee on Education Appropriations. Senate Version 490: introduced March 08. Postponed indefinitely May 08. House Sponsor: Bentley. Senate Sponsor: Benefield</p>	<p>Fay Raines in a nat'l position.</p>
California		<p>Introduced Jan 07, Chaptered by Sec of State, Oct 07. Ch. 522. Sponsor: Sen. Scott.</p>	

	Under existing law, this program becomes inoperative on July 1, 2012 and is repealed on January 1, 2013.		
CA 2	<b>SB 1620:</b> Amends existing law which authorizes the governing board of a Community College District to employ a person serving as full-time faculty or part-time faculty but prohibits employment of temporary faculty members and clinical nurses for more than a certain amount of time. Deletes the limitation placed on employment of temporary clinical nursing faculty. Excludes the percentage of hours of credit instruction taught by full-time clinical nursing faculty from the minimum standards imposed under existing law.	Introduced Feb 08. Passed full Senate May 08. In Assembly committee on Higher Ed on June 10, 2008: not heard.	
CA 3	<b>SB1621:</b> An act to amend Sections 70101, 70102, 70103, 70104, 70105, and 70106 of the Education Code, relating to nursing education. (1) Existing law establishes the State Nursing Assumption Program of Loans for Education (SNAPLE), administered by the commission, under which any person enrolled in, or a graduate of, an institution of postsecondary education or who has earned a baccalaureate or graduate level degree, and who meets the other requirements of the program, is eligible to receive a conditional [D] warrant for loan assumption <D> [A] LOAN ASSUMPTION AGREEMENT <A> , to be redeemed upon becoming employed as a full-time nursing faculty member at a California college or university.... This new bill limits participation in the SNAPLE program to those who possess a baccalaureate degree in nursing or a related field. Prohibits a person teaching nursing at an accredited State college or university from entering into a loan agreement.	Introduced Feb 08. Passed Senate 0508. Passed Assembly's Higher Ed Committee now in Appropriations. Sponsor: Sen. Ashburn.	
Colorado			There's some model legislation (188) for nurses to be involved in staffing decision-making process, study expansion of scope of care for NPs (bill #?), but nothing availa faculty shortage gaps, or education design.
Florida			Several bills re: scope of practice for ANPs.

Hawai'i				HB 212: Called for the John A. Burns School of Medicine to conduct a study re: projections through 2020 of the nursing supply shortage. Introduced: Jan 07. Signed into law, June 07 (Act no 219).
Illinois		HB 5701: The Appropriations bill: Section 60. The sum of \$ 150,000, or so much thereof as may be necessary, is appropriated from the General Revenue Fund to the Board of Higher Education for nurse educator fellowships to supplement nurse faculty salaries.	Introduced Feb 2008, Passed both houses May 08.	
Maryland				Bills HB 687/1132 re: loan assistance for serving in underserved areas. HB 1287: scholarships.
Massachusetts		HB 2059: "An act relevant to patient safety. SECTION 3 . Chapter 15A of the General Laws is hereby amended by inserting after section 15G the following section:---Section 15H. Notwithstanding the provisions of any general or special law to the contrary, any state or community college, or the University of Massachusetts may enter into employment contracts for a minimum period of 5 years with faculty members who teach nursing at such institutions, unless both parties agree to a shorter term of employment. For the purpose of this section in order to preserve the public's health and safety any nursing faculty positions made vacant by the retirement of any employee receiving benefits in accordance with this section shall be deemed a position of critical and essential nature and shall be included on the schedule provided by the board of higher education to the house and senate committee on ways and means as set forth in this section.	Introduced January 2007; May 2008, with 4714 amendments adopted. Sponsor: Caneven	

MA 2	<p><b>HB 4714:</b> Section 19I. The board of higher education shall develop a program to provide matching grants to any hospital that commits resources or personnel to nurse education programs. Such program shall provide a dollar-for-dollar match for any funds committed by a hospital to pay for nurse faculty positions in publicly funded schools of nursing, including the costs of providing hospital personnel loaned to said schools of nursing.</p>	<p>Introduced April, 2008. Amended on HOUSE floor by substitution of New Draft. Sponsor: Joint Health Finance Committee</p>	
MA 3	<p><b>S1244:</b> AN ACT TO PROMOTE SAFE PATIENT CARE AND SUPPORT THE NURSING PROFESSION. (b) Review of Nurse Faculty Resources 1) The Board of Higher Education, in collaboration with the Department of Labor and Workforce Development, the Board of Registration in Nursing, and the Massachusetts Center for Nursing, Inc., in addition to the nurse scholar program established pursuant to subsection 4, of section 19F of chapter 15 as inserted by this act, is hereby authorized and directed to make an investigation and study of the nurse faculty shortage in the Commonwealth and report back to the legislature by April 15, 2009 with recommendations to enhance the nurse faculty pipeline within the state.</p>	<p>Introduced January 2007. Went from Public Health Committee back to Senate on Feb 28, 2008 accompanied with H 2059. Sponsor: Moore</p>	
Michigan	<p><b>SB 563:</b> Establishes grant program for nursing schools; HB 5817/SB 1093: sec 405: The Michigan nursing corps grants administered by the department of labor and economic growth provide funding to address the shortage of qualified nursing faculty. Community colleges are encouraged to coordinate with the chief nurse executive in the department of community health, and with 4- year universities, to improve access to nursing programs and to assist students to successfully enter the nursing workforce. Senate bill worded: The Michigan nursing corps grants described in section 431 of 2007 PA 118 and administered by the department of labor and economic growth provide funding to address the shortage of qualified nursing faculty.</p>	<p>Introduced: February 08. June 10, 08: Senate refused to concur House's amendments, sent to Conference Committee.</p>	<p>HB 5817/SB 234. Scholarships for RN students in community colleges.</p>
Mississippi	<p><b>SB 2590:</b> An act to amend section 37-129-1, Mississippi code of 1972, to direct the Office of Nursing Education in the board of trustees of state institutions of higher learning to conduct a feasibility study for utilization of clinical simulation laboratories for Mississippi schools of nursing; and for related purposes.</p>	<p>Introduced: Feb 08, Enacted June 08. Ch 320.</p>	<p>SB 3117. Re: attracting nursing students. More fitting on the retention side but it relates to recruitment. Does MS have a recruitment problem? SB 2141 is about recruiting nurses in the Delta Zone.</p>

New Jersey	<p><b>AB 2559:</b> Supplemental appropriation of \$ 2 million for grants to certain nursing schools to address shortage of nursing faculty.</p> <p><b>SB 1662:</b> Disapproves a rule adopted by the North Carolina Board of Nursing and approved by the Rules Review Commission, regarding nursing faculty.</p>	<p>Introduced March 08. Sent to Assembly Human Services Committee in May.</p> <p>SB 1662: Introduced, May 08, on June 11, sent to House Committee on Health.</p>	<p>AB 4525: Establishes three-year Nurse Educator Pilot Program in Division of Consumer Affairs;</p> <p>SB 1662: Don't know any other details...not sure if it's favorable or not.</p>
NC 2	<p><b>HB 706/707/708/1473:</b> All have language such as " [A&gt; (3) A SCHOLARSHIP LOAN FOR UP TO TWO YEARS IN THE AMOUNT OF FIFTEEN THOUSAND DOLLARS (\$ 15,000) PER YEAR, PER RECIPIENT, TO CURRENT NURSING FACULTY IN THE NORTH CAROLINA COMMUNITY COLLEGE SYSTEM ENROLLED IN A MASTERS DEGREE PROGRAM IN NURSING EDUCATION. &lt;A] "SECTION 9.10.(b) Of the funds appropriated in this act for Graduate Nurse Scholarship Loans for full-time nursing faculty, current community college nursing faculty should receive preference for 25 scholarships in 2007-2008 and 50 scholarships in 2008-2009. SECTION 9.10.(c) From funds appropriated in this act for Graduate Nurse Scholarship Loans, the North Carolina Nursing Scholars Commission shall grant stipends of up to fifteen thousand dollars (\$ 15,000) per year, per recipient, to current nursing faculty in the North Carolina Community College System who have received a Graduate Nurse Scholarship Loan. This stipend shall be prorated based on a student's enrollment. If a recipient continues to teach at a North Carolina community college while enrolled, the total salary and stipend shall not exceed forty-four thousand six hundred seventy-two dollars (\$ 44,672).</p>	<p>2007 Appropriations Bill.</p>	
NC 2	<p><b>HB 2697:</b> ADDITIONAL NURSING FACULTY SHALL BE ALLOCATED BASED ON PROGRAM WAITING LISTS. SECTION 8.5.(a) Funds are appropriated in this act for 55 additional nursing faculty for community college nursing programs. The State Board of Community Colleges shall determine the allocation of these positions among the community colleges. This determination shall include such criteria as the length of the program's waiting list, the duration of a student's time on the waiting list, and the physical capacity of the community college to support additional faculty positions.</p>	<p>Modifies the current operations and Capital Appropriations Act of 2007. Introduced May 08, sent to House Committee on Appropriations.</p>	

North Dakota	<b>HB 1118:</b> A BILL for an Act to amend and reenact sections 43-12.1-08, 43-12.1-09, and 43-12.1-10 of the North Dakota Century Code, relating to the issuance of limited licenses and registrations by the board of nursing and the requirements of nurse applicants for license by endorsement. e. Collect and analyze data regarding nursing education, nursing practice, and nursing resources. k. Conduct and support projects pertaining to nursing education and practice.a. An applicant for licensure by examination to practice as a registered nurse or licensed practical nurse shall: Submit an official transcript showing completion of an in-state nursing education program or a board-approved out-of-state nursing education program preparing for the level of licensure sought. The board shall adopt rules establishing standards for the approval of out-of-state nursing education programs. These standards for out-of-state programs must include consideration of whether the program is accredited by the national league for nursing accrediting commission, incorporated, or the commission on collegiate nursing education and whether the program meets the requirements of the state in which the program is provided.			This law also has elements for retention of nurses.
Oregon			Introduced Dec 06, Signed by Governor March 07.	SB 1062a re: Advanced Nurse Practitioners & eliminating Rx formularies.
South Carolina	<b>SB 657/HB4038:</b> Enacts the Critical Needs Nursing Initiative Act; improves the number of qualifies nurses by providing nursing faculty salary enhancements; provides for additional nursing student scholarships, loans, and grants; establishes the Office for Health Care Workforce Research to analyze health care workforce supply and demand; provides for the use of simulation technology and equipment in the education of nurses;		Introduced: May 07 and sent to House Ways and Means Committee	Also addresses workforce issues
Texas				No relevant legislative activity available on this Lexis Nexis search.



Virginia	<p><b>HB 29:</b> An Act to amend and reenact Chapter 847 of the 2007 Acts of Assembly, which appropriated the public revenues and provided a portion of such revenues for the two years ending, respectively, on the thirtieth day of June, 2007, and the thirtieth day of June, 2008. 1.1. The State Council of Higher Education, in consultation with the Healthcare Workforce Task Force described herein, shall develop and recommend criteria for awarding additional state funds via a competitive grant process to innovative regional public-private sector partnerships that seek to maximize the number of newly licensed nurses and increase the supply of graduate nursing faculty. The Healthcare Workforce Task Force will develop criteria for the grant award process, identify aggressive attainment goals, establish mechanisms to monitor results and recommend program scope for the Council and policy makers to consider. The Task Force will be co-chaired by the Secretaries of Education and Health and Human Resources and will also include two members of the Senate appointed by the President pro tempore and three members of the House of Delegates appointed by the Speaker of the House. In addition to these seven policy makers, the Task Force will include six individuals appointed by the co-chairs with experience and knowledge of nursing and other allied health professional supply, training and practice issues as follows: two higher education leaders, two business leaders and two hospital or health system executives. 2. Out of this appropriation \$ 750,000 each year from the general fund shall be provided to Northern Virginia Community College to support public-private sector partnerships in order to maximize the number of newly licensed nurses and increase the supply of nursing faculty. 3. Out of this appropriation \$ 750,000 each year from the general fund shall be provided to the University of Virginia to support public-private sector partnerships in order to maximize the number of newly licensed nurses and increase the supply of nursing faculty.</p>	Introduced Dec 07, signed into law April 08.	AB 318 re: Advanced Practice Nurse as prescribers. SB 324 Relates to nurse-managed community health centers
Wisconsin			



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## ENDNOTES

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- <sup>i</sup> Report to The Legislative Finance Committee: "Higher Education Department State Funding of Nurse Education and Outcomes." October 27, 2005 –Report #06-01 p 3.
- <sup>ii</sup> Report to The Legislative Finance Committee: "Higher Education Department State Funding of Nurse Education and Outcomes." October 27, 2005 –Report #06-01 p 3.
- <sup>iii</sup> Buerhaus, P. et al. *The Future of the Nursing Workforce in the United States: Data, Trends and Implications*. March 2008.
- <sup>iv</sup> New Mexico Department of Workforce Solutions. <http://laser.state.nm.us/> (accessed November 3, 2008)
- <sup>v</sup> New Mexico Board of Nursing. (2008). New Mexico Board of Nursing Annual Report 2008. Retrieved December 29, 2008 from [http://www.bon.state.nm.us/pdf/2008GovReport\\_20081003.pdf](http://www.bon.state.nm.us/pdf/2008GovReport_20081003.pdf)
- <sup>vi</sup> Projected Supply, Demand, and Shortages of Registered Nurses: 2000–2020 (BHPr, 2002), NSM: Technical Report and User Guide (BHPr, 2004), NDM: Development and Baseline Projections (BHPr, 2004), and NDM User Guide (BHPr, 2004).
- <sup>vii</sup> Barsky, L, and Zilke, S. Addressing New Mexico's Nursing Shortage: A Statewide Strategy Framework. December 5, 2002.
- <sup>viii</sup> New Mexico Center for Nursing Excellence Report (2005, January).
- <sup>ix</sup> New Mexico Center for Nursing Excellence (2007, August). Report of New Mexico Nursing Education Survey. Retrieved November 11, 2008 from <http://www.nmnursingexcellence.org/associations/6561/files/NM%20Nursing%20Education%20Programs%20Survey%20August%202007.pdf>
- <sup>x</sup> New Mexico Center for Nursing Excellence (2007, August). Report of New Mexico Nursing Education Survey. Retrieved November 11, 2008 from <http://www.nmnursingexcellence.org/associations/6561/files/NM%20Nursing%20Education%20Programs%20Survey%20August%202007.pdf>
- <sup>xi</sup> Ruiz, D. (2007). Status of Nurses in New Mexico. UNM Bureau of Business and Economic Research, University of New Mexico: Albuquerque. Retrieved November 25, 2008 from <http://www.nmnursingexcellence.org/associations/6561/files/Status%20of%20Nursing%202007%20BBER%20Report%20final.pdf>
- <sup>xii</sup> "Moving from Talk to Action: Building Community Plans for a Strong Nursing Workforce" (Report retrieved November 28, 2008).
- <sup>xiii</sup> SB600 Task Force on Cultural Competence (December 2008) Task Force on Cultural Competence Education in the Health Sciences



<sup>xiv</sup> Joynt, J, and Kimball, B. Blowing Open the Bottleneck: Designing New Approaches to Increase Nurse Education Capacity.” May 2008

<sup>xv</sup>Quinn, W (2008) Nursing Education Capacity: State Legislative Bills 2007-2008. Retrieved December 18, 2008 from  
<http://www.championnursing.org/uploads/StateLegislativeBills20080620.pdf>